

Amendments to the Claims

This listing of claims replaces all prior versions and listings of claims:

Listing of Claims:

1. (Currently amended) A solid image capturing element, comprising:
a plurality of vertical shift registers arranged to each ~~correspond to a column~~
of a plurality of light receiving pixels in a matrix arrangement,

a horizontal shift register provided on an output side of the plurality of
vertical shift registers, and

an output section provided on an output side of the horizontal shift register,
wherein

a semiconductor region of ~~one~~ a first conductive type is formed ~~eleser~~ closest
to a shift register-side surface of a semiconductor substrate of ~~one~~ the first
conductive type, while a semiconductor region of ~~reverse~~ a second conductive type
which is different from the first conductive type is formed in a ~~deeper~~
farther from the shift register-side surface than the semiconductor region of ~~one~~ the
first conductive type, and

a first semiconductor region and a second semiconductor region having a
higher dopant concentration than that of the first semiconductor region are formed
in the semiconductor region of ~~reverse~~ the second conductive type,

the horizontal shift register is formed ~~in~~ above the first semiconductor region;
and

the output section is formed ~~in~~ above the second semiconductor region.

2. (Original) The solid image capturing element according to claim 1, further
comprising:

an output gate formed on the semiconductor substrate at a boundary between
the horizontal shift register and the output section.

3. (Previously presented) The solid image capturing element according to
claim 1, wherein

in the semiconductor region of reverse conductive type, a third semiconductor region having a lower dopant concentration than that of the first semiconductor region is formed, and

the plurality of vertical shift registers are formed in the third semiconductor region.

4. (Currently amended) A method for manufacturing a solid image capturing element having a plurality of vertical shift registers arranged to each correspond to a column of a plurality of light receiving pixels in a matrix arrangement, a horizontal shift register provided on an output side of the plurality of vertical shift registers, and an output section provided on an output side of the horizontal shift register, comprising:

a first step of forming ~~closer~~ closest to a shift register-side surface of a ~~conductive~~ semiconductor substrate of a first conductive type, a ~~first reverse~~ conductive semiconductor region ~~having a first dopant concentration of the first~~ conductive type;

a second step of forming a semiconductor region of a second conductive type which is different from the first conductive type in a deeper portion in the ~~conductive semiconductor substrate than the conductive semiconductor region,~~ farther from the shift register-side surface than the semiconductor region of the first conductive type;

~~a second reverse conductive semiconductor region having a second dopant concentration which is higher than the first dopant concentration; and~~

a third step of forming in the semiconductor region of the second conductive type, a first semiconductor region and a second semiconductor region having a dopant concentration higher than the dopant concentration of the first semiconductor region, and the horizontal shift register ~~on~~ above the first reverse conductive semiconductor region and the output section ~~on~~ above the second reverse conductive semiconductor region.

5. (Currently amended) The method for manufacturing a solid image capturing element according to claim 4, further comprising:

a fourth step of forming in the semiconductor region of ~~reverse~~ the second conductive type, a third ~~reverse~~ conductive semiconductor region having a third dopant concentration which is lower than the first dopant concentration, wherein

at the fourth step, the plurality of light receiving pixels and the plurality of vertical shift registers are formed in the third semiconductor region.

6. (Currently amended) The method for manufacturing a solid image capturing element according to claim 4, wherein a dopant is doped in a stepwise manner to the first ~~reverse-conductive~~ semiconductor region and the second ~~reverse-conductive~~ semiconductor region, and

doping of the dopant is performed commonly at least once to the first ~~reverse-conductive~~ semiconductor region, the second ~~reverse-conductive~~ semiconductor region, and the third ~~reverse~~ conductive semiconductor region.